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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/617,308	07/14/2000	Toshitaka Agano	Q58739	8383

7590 12/31/2002

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EXAMINER

ABDULSELAM, ABBAS I

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 12/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/617,308

Applicant(s)

AGANO, TOSHITAKA

Examiner

Abbas I Abdulsalam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections 35 U.S.C. 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (USPN 5926292) in view of Silverstein et al. (USPN 6166800).

Regarding claims 1 and 10, Ishikawa teaches an image processing unit (44), image forming unit (45) and a monitor (48) for displaying processed image data. Ishikawa teaches an image processing capable of maintaining good qualities of color image and text. See col. 2, lines 51-55. Ishikawa teaches gradations of each of R, G, and B planes in terms of bits per pixel and further teaches a scenario where increased resolution for text and enhanced gradation for image is possible. See col. 1, lines 45-67 and 52-57. Ishikawa teaches pallet encode circuits (207, 331) that convert an image pixel data into pallet colors. For example, 24 bit data for RGB colors is converted into 9 bit pallet code. See col. 9, lines 57-67, col. 10, lines 1-3 Fig 6 and Fig 13. In addition Ishikawa teaches gradation adding circuit (9). See Fig 3. However, Ishikawa does not teach displaying a monochromatic image having a higher gradation resolution than production performance of each of RGB cells. Silverstein on the other hand teaches a color image capture system (20) with respect to color signals at each pixel. Silverstein teaches that a high resolution

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monochrome images can be acquired by operating the color separation elements (44, 144) in which cells (46, 48 50) are operated in order to acquire an accurate monochrome image. See col. 8, lines 38-45 and col. 10, lines 61-66 Fig 1 and Fig 5.

Therefore it would have been obvious to one having skill in the art at the time the invention was made to modify Ishikawa's image processing apparatus to include Silverstein's color separation elements. One would have been motivated in view of Silverstein that the color separation elements are functionally equivalent means by which the desired monochromatic images with higher gradation resolution can be displayed. The use of color separation elements helps an image capturing system as taught by Silverstein.

Regarding claims 2-3, Ishikawa teaches that a single pixel data is input with 8 bits for each of Red, Green, and Blue colors. See col. 13, lines 48-51.

Regarding claims 4, 11, 16, and 19-20, Silverstein teaches a color image capture system (20) in terms of higher density of green-filtered sensors which helps estimate the extent of luminance. See Fig 1, col. 1, lines 60-67 and col. 2, lines 1-9.

Regarding claims 5-6 and 12-13, Ishikawa teaches the image data corresponding to one image pixel is input by a 24 bit data which means 8 bits for each of Red, green and Blue colors.

Regarding claims 7-8 and 14-15, Ishikawa teaches an image area detecting circuit (205) which include (x, y) coordinates values of the pixel. See col. 11, lines 30-50.

Regarding claim 9, Ishikawa teaches pixel data of one frame as well as image processing circuit (204) with respect to timing.

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Regarding claims 17-18, Ishikawa teaches an image processing apparatus capable of providing an image of high quality including diversified imaging. See col. 3, lines 5-10.

Regarding claims 21-23, Silverstein teaches the use of holographic polymer dispersed in cells of the color separation elements (44, 144) which produce red, blue green and separations and also teaches the polymer in connection with production of appropriate spectral bandwidth from each color components. In addition Silverstein teaches spectral reflectance functions being represented in terms of a plot of wavelength versus reflectance . See Fig 6. Col. 10, lines 61-67 and col. 11, lines 1-19.

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Conclusion

2. The prior art made of record and not relied upon is considered to applicant's disclosure.

The following arts are cited for further reference.

U.S. Pat No. 6,342,896 to Shetter et al.

U.S. Pat No. 6,317,521 to Gallagher et al.

U.S. Pat No. 6,262,786 to Perlo et al.

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3. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abdulsalam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand delivered responses should be brought to crustal park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.



RICHARD HJERPE

**SUPV
TECHNOLOGY CENTER 2600**

Abbas Abdulsalam

Examiner

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